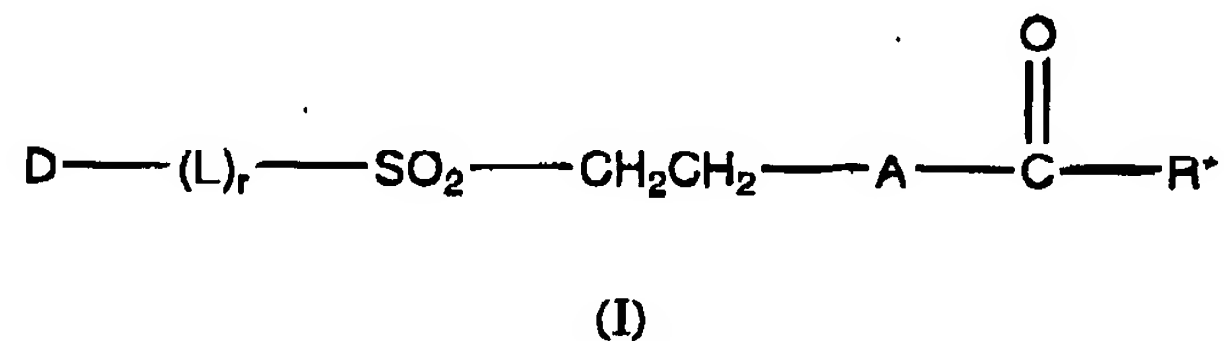


### AMENDMENTS TO THE CLAIMS

1. (currently amended) A reactive dye compound comprising:
  - (a) at least one chromophore moiety
  - (b) at least one  $\text{SO}_2\text{C}_2\text{H}_4$  group which is attached to the chromophore moiety either directly via the sulphur atom of the  $\text{SO}_2\text{C}_2\text{H}_4$  group or via a linking group L;wherein at least one  $\text{SO}_2\text{C}_2\text{H}_4$  group is substituted on its terminal carbon atom with at least one Y group wherein Y is  $-\text{A}(\text{CO})\text{R}^*$  wherein A is O or S and wherein  $\text{R}^*$  is an organic residue which contains at least one nucleophilic group; or a salt thereof. [and salts thereof.]
2. (currently amended) A reactive dye compound according to Claim 1 wherein  $\text{R}^*$  is selected from the group consisting of  $(\text{CH}_2)_n\text{SH}$ ,  $(\text{CH}_2)_n\text{NH}_2$ ,  $\text{CH}(\text{CH}_3)\text{OH}$ ,  $\text{CH}(\text{CH}_3)\text{O}(\text{CO})\text{CH}(\text{CH}_3)\text{OH}$ , derivatives of a polyester of citric acid,  $\text{CH}(\text{OH})(\text{CH}_2\text{COOH})_2$ ,  $\text{CH}_2(\text{OH})(\text{CO}_2\text{H})\text{CH}_2\text{COOH}$ ,  $\text{C}(\text{OH})(\text{H})\text{CH}_2\text{COOH}$ ,  $\text{CH}_2\text{C}(\text{H})(\text{OH})\text{COOH}$ ,  $\text{C}(\text{OH})(\text{H})\text{C}(\text{OH})(\text{H})\text{COOH}$ ,  $(\text{CH}_2)_n\text{NH}[\text{R}^1]_n\text{R}_n$ ,  $\text{CH}_2\text{N}[\text{R}^1\text{R}^2]_n\text{R}_n$ ,  $\text{CH}_2\text{NHNH}_2$ ,  $\text{CH}_2\text{NHOH}$ ,  $\text{CH}_2\text{SMe}$ ,  $\text{CHNH}_2(\text{CH}_2)_n(\text{COOH})$ ,  $\text{CHNH}_2\text{CH}_2\text{SMe}$ ,  $\text{CHNH}_2\text{CH}_2\text{SSCH}_2\text{CHNH}_2\text{COOH}$ ,  $\text{CHNH}_2\text{CH}_2\text{SO}_3\text{H}$ ,  $\text{C}_6\text{H}_4\text{OH}$ ,  $\text{C}_6\text{H}_4\text{COOH}$ ,  $\text{C}_6\text{H}_4\text{NH}_2$ ,  $\text{C}_6\text{H}_4\text{N}$ ,  $(\text{CH}_2)_n\text{C}_6\text{H}_4\text{N}$ ,  $\text{CH}(\text{R}\#)\text{NH}_2$ ,  $(\text{CH}_2)_n\text{-SSO}_3^-$ ,  $(\text{CH}_2)_n\text{-S-S-}(\text{CH}_2)_n$ , peptides [and] or polypeptides,[:] wherein  $\text{R}_1$  and  $\text{R}_2$  is independently selected from  $\text{C}_1\text{-C}_4$  alkyl, wherein n is an integer in the range of 1 to 4 wherein within the same molecule n is not necessarily the same integer and wherein  $\text{R}\#$  corresponds to an amino acid sidechain.
3. (previously amended) A reactive dye according to claim 2 wherein  $\text{R}^*$  is selected from the group consisting of  $(\text{CH}_2)_n\text{SH}$ ,  $(\text{CH}_2)_n\text{NH}_2$ ,  $\text{C}_6\text{H}_4\text{N}$ ,  $\text{CH}(\text{R}\#)\text{NH}_2$ ,  $\text{CH}(\text{CH}_3)\text{OH}$ ,  $\text{CH}(\text{CH}_3)\text{O}(\text{CO})\text{CH}(\text{CH}_3)\text{OH}$ ,  $\text{C}(\text{OH})(\text{CH}_2\text{COOH})_2$ ,  $\text{CH}_2\text{C}(\text{OH})(\text{COOH})\text{CH}_2\text{COOH}$ ,  $\text{C}(\text{H})(\text{CH}_3)\text{OH}$ ,  $\text{C}(\text{H})(\text{OH})\text{CH}_2\text{COOH}$ ,  $\text{CH}_2\text{C}(\text{H})(\text{OH})\text{COOH}$ ,  $\text{C}(\text{H})(\text{OH})\text{C}(\text{H})(\text{OH})\text{COOH}$ ,  $\text{C}_6\text{H}_4\text{OH}$  and  $\text{C}_6\text{H}_4\text{NH}_2$ .
4. (previously amended) A reactive dye compound according to claim 3 wherein  $\text{R}^*$  is  $\text{C}(\text{OH})(\text{CH}_2\text{COOH})_2$  or  $\text{CH}_2\text{C}(\text{OH})(\text{COOH})\text{CH}_2\text{COOH}$ .
5. (previously amended) A reactive dye compound according to claim 1 wherein A is O.

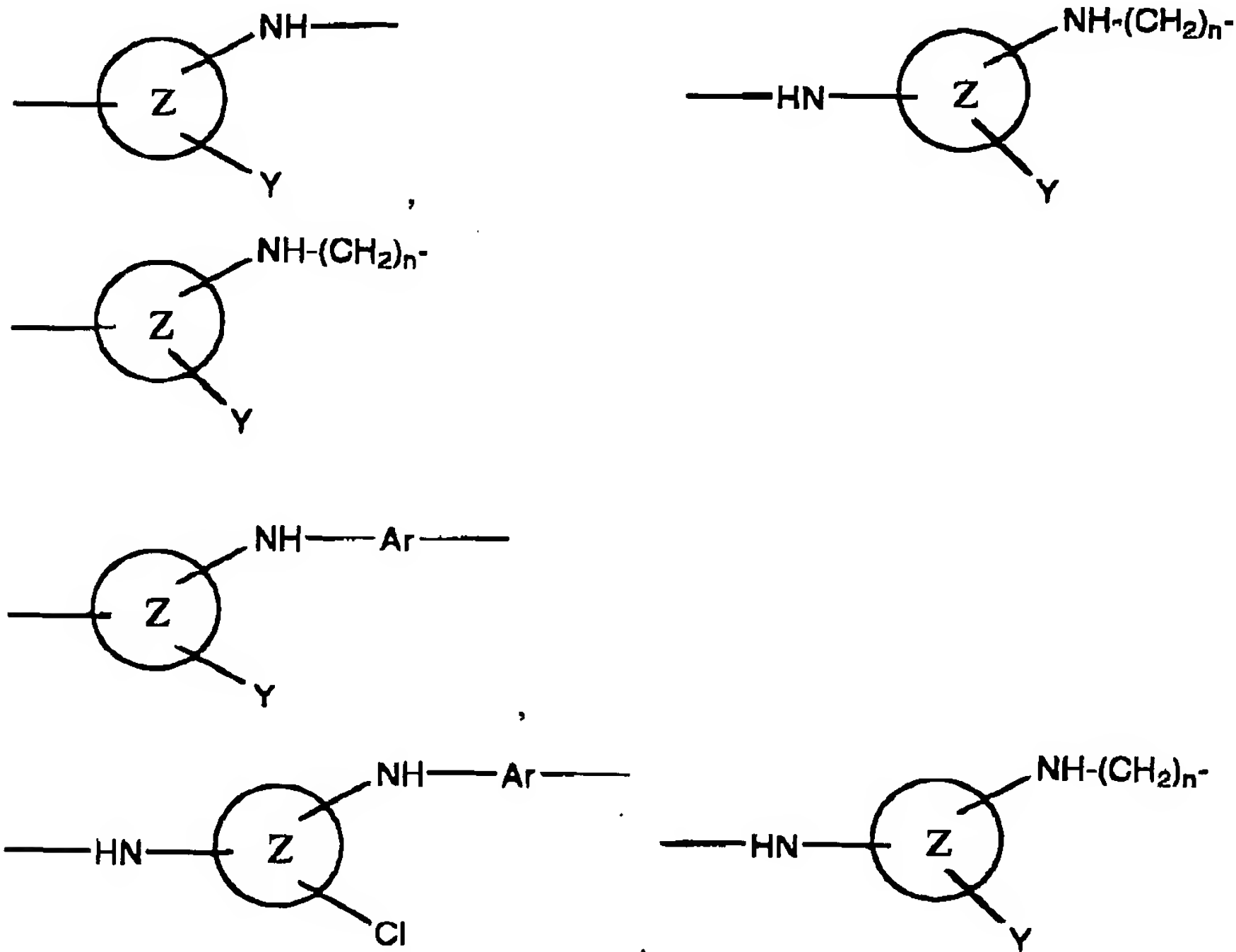
6. (currently amended) A reactive dye compound having the formula (I):



wherein: D is a chromophore group;

r is 0 or 1;

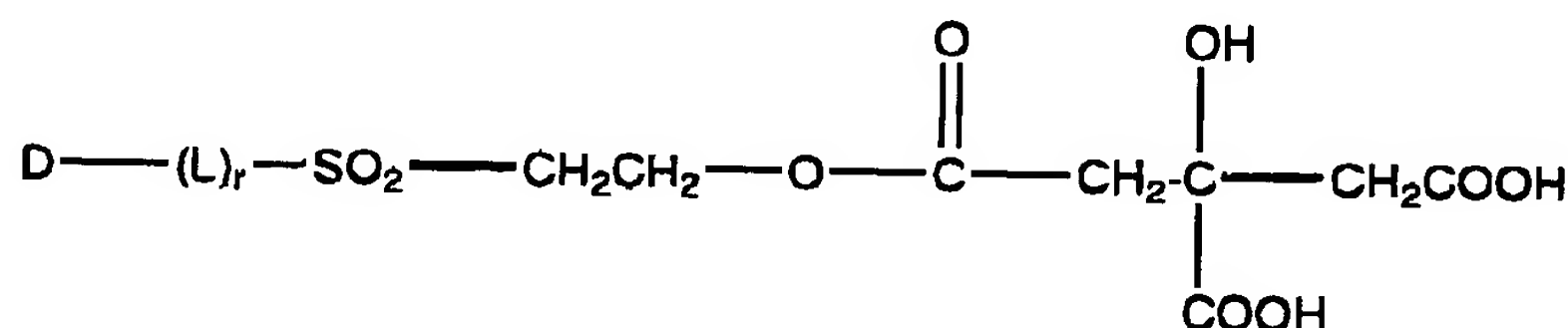
L is a linking group selected from the group consisting of NH, (CH<sub>2</sub>)<sub>n</sub>, N-(CH<sub>2</sub>)<sub>n</sub>N, -(CH<sub>2</sub>)<sub>n</sub>-N, NR (R is C1-C4 alkyl),





[and salts thereof.] or a salt thereof.

7. (previously amended) A reactive dye according to Claim 6 wherein R\* is selected from the group consisting of (CH<sub>2</sub>)<sub>n</sub>SH, (CH<sub>2</sub>)<sub>n</sub>NH<sub>2</sub>, C<sub>6</sub>H<sub>4</sub>N, CH(R#)NH<sub>2</sub>, CH(CH<sub>3</sub>)OH, CH(CH<sub>3</sub>)O(CO)CH(CH<sub>3</sub>)OH, C(OH)(CH<sub>2</sub>COOH)<sub>2</sub>, CH<sub>2</sub>C(OH)(COOH)CH<sub>2</sub>COOH, C(H)(CH<sub>3</sub>)OH, C(H)(OH)CH<sub>2</sub>COOH, CH<sub>2</sub>C(H)(OH)COOH, C(H)(OH)C(H)(OH)COOH, C<sub>6</sub>H<sub>4</sub>OH and C<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>.
8. (currently amended) A reactive dye according to claim 6 wherein R\* is selected from the group consisting of C(OH)(CH<sub>2</sub>COOH)<sub>2</sub>, CH<sub>2</sub>C(OH)(COOH)CH<sub>2</sub>COOH and derivatives of a polyester of citric acid [polymer].
9. (previously amended) A reactive dye compound according to claim 6 wherein A is O.
10. (currently amended) A reactive dye compound having the structure:

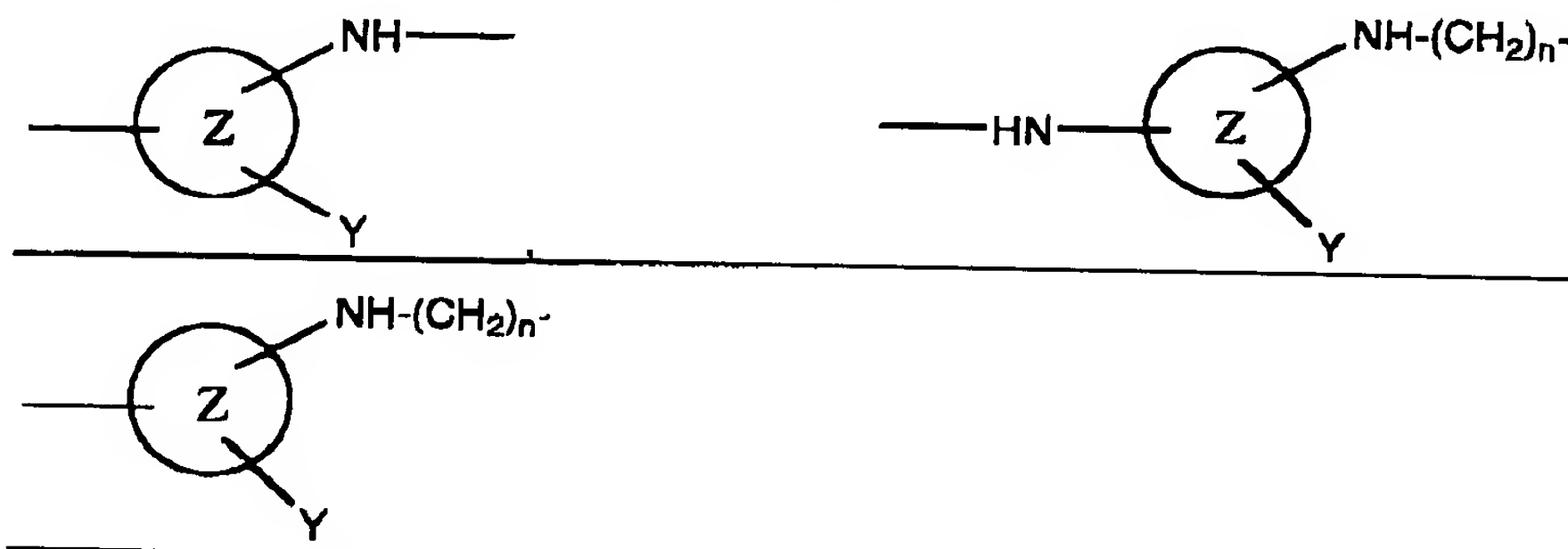


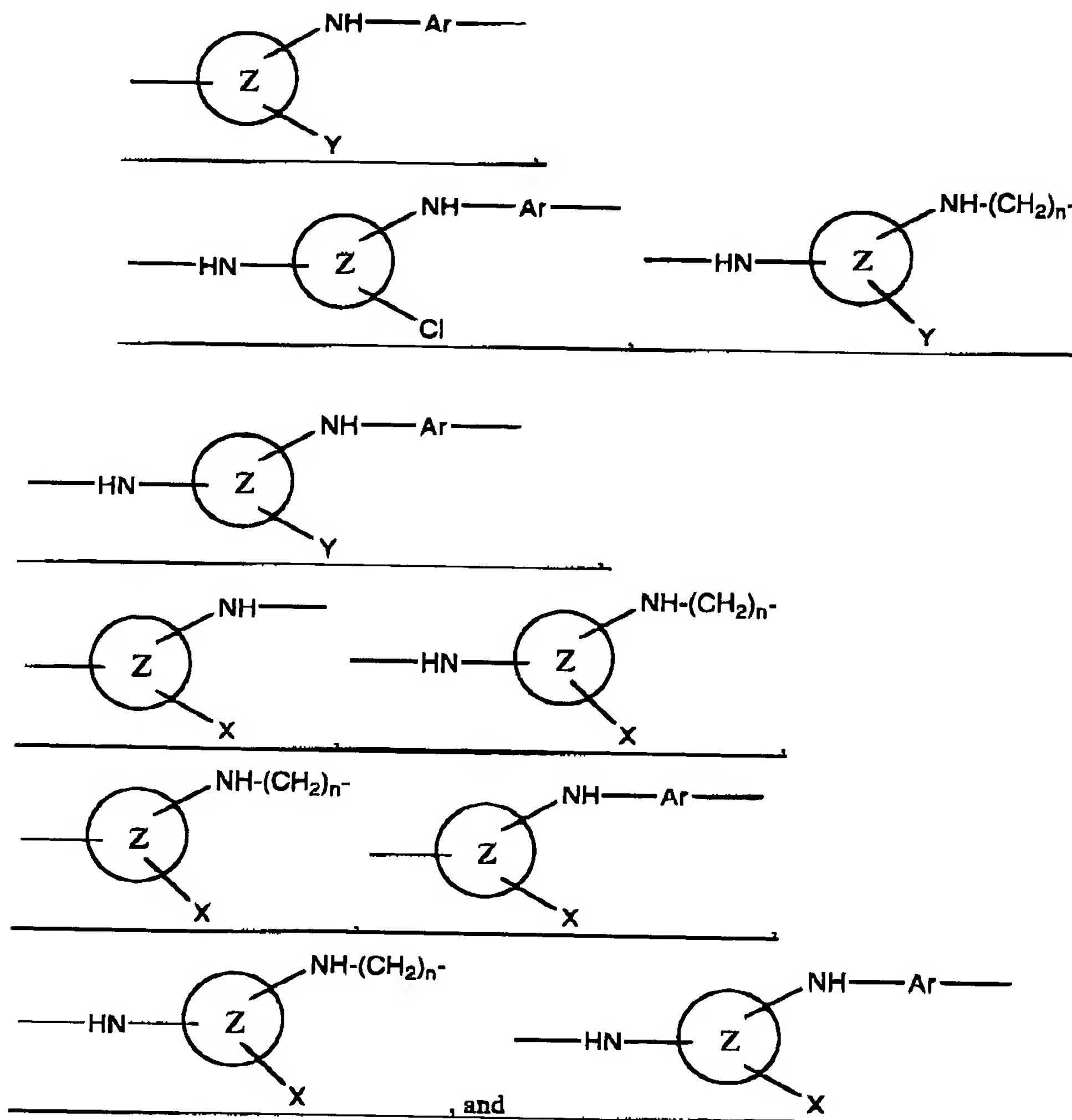
(Ia)

wherein [D, L, r are as defined above.] D is a chromophore group;

r is 0 or 1;

L is a linking group selected from the group consisting of NH, (CH<sub>2</sub>)<sub>n</sub>,  
 N-(CH<sub>2</sub>)<sub>n</sub>N, -(CH<sub>2</sub>)<sub>n</sub>-N, NR (R is C1-C4 alkyl).





wherein Ar is an aryl group, Y is halogen or  $O(C=O)R^*$ , n is an integer of from 1 to 4, Z is a nitrogen-containing heterocycle, X is selected from the group consisting of thio-derivatives, halogens, amines, alkoxy groups, carboxylic acid groups, CN,  $N_3$ , and quaternized nitrogen derivatives ( $O^+$ );

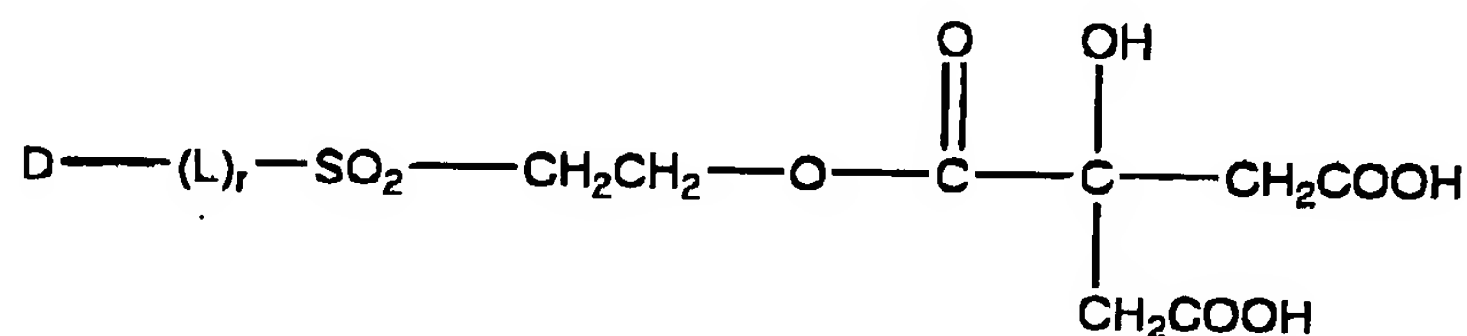
A is O or S,

$R^*$  is selected from the group consisting of  $(CH_2)_nSH$ ,  $(CH_2)_nNH_2$ ,  $CH(CH_3)OH$ ,  $CH(CH_3)O(CO)CH(CH_3)OH$ , derivatives of a polyester of citric acid,  $CH(OH)(CH_2COOH)_2$ ,  $CH_2(OH)(CO_2H)CH_2COOH$ ,  $C(OH)(H)CH_2COOH$ ,

CH<sub>2</sub>C(H)(OH)COOH, C(OH)(H)C(OH)(H)COOH, (CH<sub>2</sub>)<sub>n</sub>NHR<sub>1</sub>, CH<sub>2</sub>NR<sub>1</sub>R<sub>2</sub>,  
 CH<sub>2</sub>NHNH<sub>2</sub>, CH<sub>2</sub>NHOH, CH<sub>2</sub>SM<sub>e</sub>, CHNH<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>(COOH), CHNH<sub>2</sub>CH<sub>2</sub>SM<sub>e</sub>,  
 CHNH<sub>2</sub>CH<sub>2</sub>SSCH<sub>2</sub>CHNH<sub>2</sub>COOH, CHNH<sub>2</sub>CH<sub>2</sub>SO<sub>3</sub>H, C<sub>6</sub>H<sub>4</sub>OH, C<sub>6</sub>H<sub>4</sub>COOH,  
 C<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>, C<sub>6</sub>H<sub>4</sub>N, (CH<sub>2</sub>)<sub>n</sub>C<sub>6</sub>H<sub>4</sub>N, CH(R<sup>#</sup>)NH<sub>2</sub>, (CH<sub>2</sub>)<sub>n</sub>-SSO<sub>3</sub><sup>-</sup>, (CH<sub>2</sub>)<sub>n</sub>-S-S-(CH<sub>2</sub>)<sub>n</sub>,  
 peptide or polypeptide, wherein R<sub>1</sub> and R<sub>2</sub> is independently selected from C<sub>1</sub>-C<sub>4</sub> alkyl,  
 wherein n is an integer in the range of 1 to 4 wherein within the same molecule n is not  
 necessarily the same integer and wherein R<sup>#</sup> corresponds to an amino acid sidechain;

or a salt thereof.

11. A reactive dye compound having the structure:

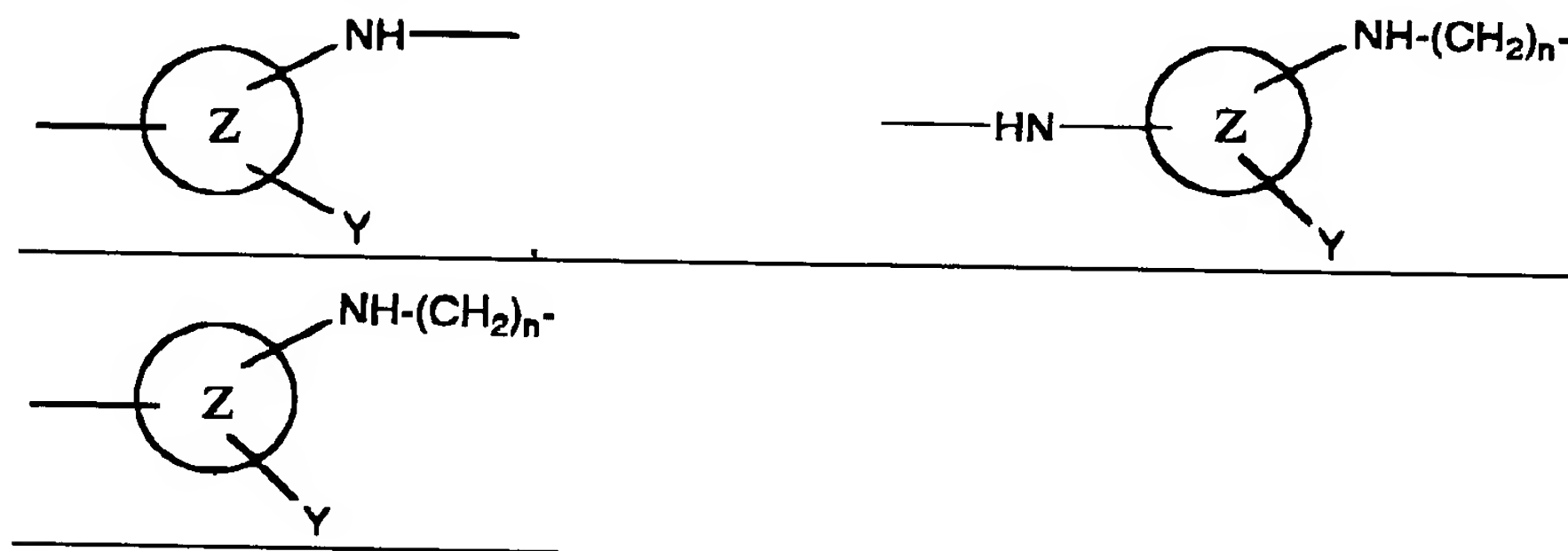


(Ib)

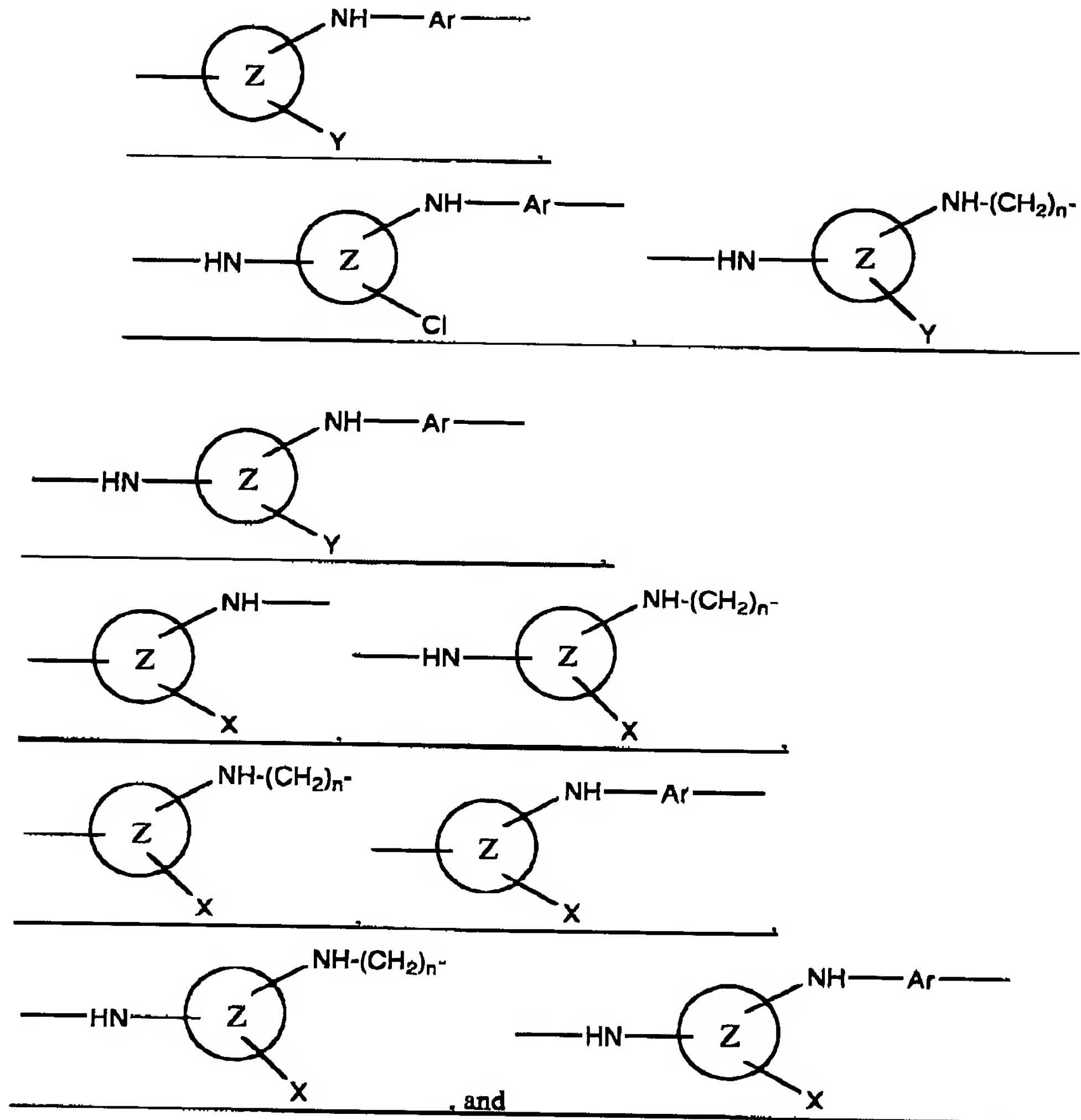
wherein [D, L and r are as defined above.] D is a chromophore group;

r is 0 or 1;

L is a linking group selected from the group consisting of NH, (CH<sub>2</sub>)<sub>n</sub>,  
 N-(CH<sub>2</sub>)<sub>n</sub>N, -(CH<sub>2</sub>)<sub>n</sub>-N, NR (R is C<sub>1</sub>-C<sub>4</sub> alkyl),



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 Reply to Office Action of Feb. 3<sup>rd</sup>, 2003



wherein Ar is an aryl group, Y is halogen or  $O(C=O)R^+$ , n is an integer of from 1 to 4, Z is a nitrogen-containing heterocycle, X is selected from the group consisting of thio-derivatives, halogens, amines, alkoxy groups, carboxylic acid groups, CN,  $N_3$ , and quaternized nitrogen derivatives ( $O^+$ );

A is O or S,

$R^+$  is selected from the group consisting of  $(CH_2)_nSH$ ,  $(CH_2)_nNH_2$ ,  $CH(CH_3)OH$ ,  $CH(CH_3)O(CO)CH(CH_3)OH$ , derivatives of a polyester of citric acid,  $CH(OH)(CH_2COOH)_2$ ,  $CH_2(OH)(CO_2H)CH_2COOH$ ,  $C(OH)(H)CH_2COOH$ ,

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CH<sub>2</sub>C(H)(OH)COOH, C(OH)(H)C(OH)(H)COOH, (CH<sub>2</sub>)<sub>n</sub>NHR<sub>1</sub>, CH<sub>2</sub>NR<sub>1</sub>R<sub>2</sub>,  
 CH<sub>2</sub>NHNH<sub>2</sub>, CH<sub>2</sub>NHOH, CH<sub>2</sub>SMe, CHNH<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>(COOH), CHNH<sub>2</sub>CH<sub>2</sub>SMe,  
 CHNH<sub>2</sub>CH<sub>2</sub>SSCH<sub>2</sub>CHNH<sub>2</sub>COOH, CHNH<sub>2</sub>CH<sub>2</sub>SO<sub>3</sub>H, C<sub>6</sub>H<sub>4</sub>OH, C<sub>6</sub>H<sub>4</sub>COOH,  
 C<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>, C<sub>6</sub>H<sub>4</sub>N, (CH<sub>2</sub>)<sub>n</sub>C<sub>6</sub>H<sub>4</sub>N, CH(R#)NH<sub>2</sub>, (CH<sub>2</sub>)<sub>n</sub>-SSO<sub>3</sub><sup>-</sup>, (CH<sub>2</sub>)<sub>n</sub>-S-S-(CH<sub>2</sub>)<sub>n</sub>,  
 peptide or polypeptide, wherein R<sub>1</sub> and R<sub>2</sub> is independently selected from C<sub>1</sub>-C<sub>4</sub> alkyl,  
 wherein n is an integer in the range of 1 to 4 wherein within the same molecule n is not  
 necessarily the same integer and wherein R# corresponds to an amino acid sidechain;

or a salt thereof.

12. (previously amended) Method of using a compound according to claim 1 for dyeing cellulosic substrates.
13. (previously amended) Method of using a compound according to claim 1 for dyeing wool.
14. (previously amended) Method of using a compound according to claim 1 for dyeing polyamide substrates.
15. (previously amended) Method of using a compound according to claim 1 for dyeing silk.
16. (previously amended) Method of using a compound according to claim 1 for dyeing keratin.
17. (previously amended) Method of using a compound according to claim 1 for dyeing leather.
18. (previously amended) Process for the preparation of a compound according to claim 1 comprising the steps of reacting a first starting material with a second starting material, the first starting material comprising at least one chromophore, at least one SO<sub>2</sub>C<sub>2</sub>H<sub>4</sub> which is attached to the chromophore group either directly via the sulphur atom of the SO<sub>2</sub>C<sub>2</sub>H<sub>4</sub> group or via a linking group L, the second starting material comprising an oxy- or thio-carbonyl group.
19. (currently amended) Process according to Claim 18 wherein the process is carried out at a pH of from about 2 to about 8.



20. (previously amended) Process according to Claim 18 or 19 wherein the second starting material is added to the first starting material slowly.
21. (previously amended) Product obtainable by a process according to claim 18.
22. (previously amended) A dye composition comprising the compound of claim 1.
23. (original) A dye composition according to Claim 22 wherein the composition is in the form of a solid mixture and further comprises an acid buffer.
24. (original) A dye composition according to Claim 22 wherein the composition is in the form of a liquid and further comprises water and an acid buffer.
25. (original) A dye composition according to Claim 22 wherein the composition is in the form of a paste and further comprises water, thickening agent and an acid buffer.
26. (previously amended) A dye composition according to claim 22 wherein the pH is from about 2 to about 3.